Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services
Richmond, Virginia

Tuning Fork Laboratory Quality Manual Checklist

Protocol for the Certification of Laboratories Performing Tuning Fork Certification Testing

Facility Name: _____ Lab ID: _____

Assessor:_____ Analyst: _____ Inspection Date:_____

ATTACHMENTS
- ☐ **Laboratory Equipment List, #6959 or equivalent**
- ☐ **Laboratory Personnel List, #6960 or equivalent**
- ☐ **Laboratory Inspection Checklist, #6954**

Item	Relevant Aspect of Protocol	Reference	Y	N	NA	Comments
1	Company name, address and contact information	III.B.1				
2	Statements affirming the laboratory's commitments to quality assurance and data integrity.	III.B.2				
3	List of personnel and qualifications	III.B.3				
4	Log of printed names, handwritten initials and signatures of all laboratory personnel authorized to perform tuning fork testing, data review, and certificate notarization.	III.B.4				
5	List of all testing equipment—including manufacturer, model, and serial number—used in the certification procedure.	III.B.5				
6	Information describing the accuracy, range and reproducibility for each instrument and item of support equipment used for the testing and certification of tuning forks.	III.B.6				
7	Corrective Action Policy for response when instrumentation fails to meet fitness for use acceptance criteria.	III.B.7				
8	Schedules for instrument calibration and maintenance including requirements for documenting calibration and maintenance.	III.B.8				
9	Description of circumstances that would require recertification of reference tuning forks (trauma, damage or change in performance).	III.B.9				

Notes

Item	Relevant Aspect of Protocol	Reference	Y	N	NA	Comments
10	Processes and procedures for ensuring traceability of measurements to nationally recognized standards.	III.B.10				
Description of Procedures being performed, equipment being used, calculations, and examples, adjustments (if any), and references. This information may be included in the Quality Manual or may be a separate Standard Operating Procedure (SOP). At a minimum, the information shall include:						
11	Sample receiving and tracking procedures.	III.B.11.a				
12	Sample Rejection Policy describing the circumstances under which a tuning fork would not be accepted for testing.	III.B.11.b				
13	Procedures for labeling and disposition of rejected tuning forks.	III.B.11.c				
14	Instructions for instrument setup, fitness for use testing and documentation, and acceptance criteria.	III.B.11.d				
The procedure for testing tuning forks submitted by law enforcement agencies for certification and documenting test results:						
15	Reference tuning forks tested prior to beginning testing and at the conclusion of each sample set	III.B.11.e.i				
16	Frequency of oscillation of each reference tuning fork shall be within ±0.5% of that specified by the manufacturer or the most recent independent certification	III.B.11.e.ii				
17	Temperature of the test environment not less than 20°C and not greater than 30°C	III.B.11.e.iii				
18	At least 2 frequency observations recorded and averaged for the calculation of MPH	III.B.11.e.iv				
19	Each page of test documentation dated and initialed by the analyst	III.B.11.e.v				
Review and reporting of test data and calculations:						
20	Process for reviewing and reporting test data and calculations	III.B.11.f				
21	Data review documented with date and initials of reviewer	III.B.11.f.i				
Notes						

Item	Relevant Aspect of Protocol	Reference	Y	N	NA	Comments
22	Final reports notarized	III.B.11.f.ii				
23	Processes for customer notification as well as labeling and disposition of tuning forks that fail the certification testing	III.B.11.g				
24	Data review documented with date and initials of reviewer	III.B.11.f.i				
25	Final reports notarized	III.B.11.f.ii				
26	Processes for customer notification as well as labeling and disposition of tuning forks that fail the certification testing	III.B.11.g				
Technician Training: Description of the complete training process and supporting documentation						
27	Training goals and expected results	III.B.12.a				
28	Learning objectives and expectations upon completion of training	III.B.12.b				
29	Learning methods and/or activities	III.B.12.c				
30	Documentation of training	III.B.12.d				
31	Training effectiveness criteria	III.B.12.e				
32	Evaluation of training—assessment of documentation against criteria	III.B.12.f				
Demonstration of Capability—a procedure for establishing technician competence in testing and establishes acceptance criteria for the evaluation of analyst capability:						
33	Each technician shall perform a minimum of 20 consecutive frequency observations of each reference tuning fork	III.B.13.a.i				
34	Each technician shall calculate the mean of each data set	III.B.13.a.ii				
35	The mean frequency of oscillation of each reference tuning fork shall be within ±0.5% of that specified by the manufacturer or the most recent independent certification	III.B.13.b				
Record Retention Policy						
36	Maintenance logs retained a minimum of three (3) years	III.B.14.a.i				
Notes						

Item	Relevant Aspect of Protocol	Reference	Y	N	NA	Comments
37	Calibration records retained a minimum of three (3) years	III.B.14.a.ii				
38	Sample observation records retained a minimum of three (3) years	III.B.14.a.iii				
39	Training records and Demonstrations of Capability retained a minimum of three (3) years	III.B.14.a.iv				
Documentation practices						
40	All handwritten data shall be recorded in ink	III.B.14.b.i				
41	Changes to laboratory records shall be made with a single strike-out line leaving the original entry visible	III.B.14.b.ii				
42	Changes shall be documented with date and initials of person making the correction	III.B.14.b.iii				
43	Describe procedures for ensuring the security of electronic records	III.B.14.c				
A sample copy of a certificate issued to customers showing the following						
44	Serial number or other unique identifier of the tuning fork	III.B.15.a				
45	The frequency at which the tuning fork was found to oscillate and the corresponding MPH (miles per hour)	III.B.15.b				
46	The designation of the radar frequency band within which the tuning fork is to be used	III.B.15.c				
47	Date of certification testing	III.B.15.d				
48	Signature of the analyst who performed the testing	III.B.15.e				
49	Date, seal and signature of notarization	III.B.15.f				
50	Any additional information required by court systems of the jurisdictions in which laboratory's clients are located	III.B.15.g				
51	Change sheet to allow historic reconstruction of changes to the Quality Manual	III.B.16				
52	Annual review and signature sheet	III.B.17				
Notes						